WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:

a) input means for inputting image date of plural objects;

b) encoding means for encoding the image data inputted by said input means on an object basis; and

c) control means for setting a priority order of code amount allocation for each of the objects and in accordance with said priority order, controlling encoding conditions for each of the objects in said encoding means,

wherein said control means controls the encoding conditions in said encoding means so that a total code amount obtained by encoding the image data of said plural objects does not exceed a predetermined code amount.

2. An apparatus according to claim 1, wherein said control means changes said priority order at a predetermined timing.

3. An apparatus according to claim 2, wherein said predetermined timing is determined according to how many times a code amount reduction processing for said objects is executed or according to code amounts of said objects.

4. An apparatus according to claim 1, wherein, when the code amount of an object set to a lowest priority becomes smaller than a predetermined lower limit value, said control means sets an other object to the lowest priority.

5. An apparatus according to claim 1, wherein said encoding means breaks down the image data of said objects at least into pixel data and shape data and encodes the pixel data and the shape data, and said control means determines said priority order in accordance with a size of shape data of said objects.

6. An apparatus according to claim 1, wherein said encoding means executes the encoding operation in accordance with MPEG-4, and said control means determines said priority order in accordance with the sizes of bounding boxes of said objects.

7. An apparatus according to claim 1, wherein said encoding means includes quantization means for quantizing the image data of said objects, and quantization parameters of said quantization means are controlled by said encoding conditions.

8. An apparatus according to claim 1, further comprising recording means for recording the data

encoded by said encoding means into a recording medium.

9. An image processing apparatus according to claim 1, wherein said input means comprises image pickup means for photographing an object image and generating image data.

10. A video camera provided with the image processing apparatus according to claim 1.

11. An image processing method comprising the steps of:

a) inputting image data of plural objects;

b) encoding the inputted image data on an object basis; and

c) setting a priority order of code amount allocation for each of the objects and, in accordance with said priority order, controlling encoding conditions for each of the objects in said encoding step,

wherein, in said controlling step, the encoding conditions in said encoding step are controlled so that a total code amount obtained by encoding the image data of said plural objects does not exceed a predetermined code amount.

12. A storage medium for storing program codes of encoding steps, said encoding steps comprising:

a) an inputting step of inputting image data of plural objects;

b) an encoding step of encoding the inputted image data on an object basis; and

c) a controlling step of setting a priority order of code amount allocation for each of the objects and, in accordance with said priority order, controlling encoding conditions for each of the objects in said encoding step,

wherein, in said controlling step, the encoding conditions in said encoding step are controlled so that a total code amount obtained by encoding the image data of said plural objects does not exceed a predetermined code amount.